



ATOM ARC 7018-1 AWS A5.1: E7018-1H4R

FEATURES

Atom Arc 7018-1 is an all-position, low hydrogen electrode that provides exceptional impact toughness at low service temperatures. Atom Arc 7018-1 provides smooth metal transfer, minimal spatter, and easy slag removal. Atom Arc 7018-1 is used to join a wide variety of carbon and low alloy steels. It is also an excellent choice for welding higher strength steels if undermatching welds are specified.

CLASSIFICATIONS AND APPROVALS

- AWS A5.1:E7018-1H4R
- D.N.V.- 3Y (H10)
- L.R.- 3m,3Ym (H10)
- ASME SFA 5.1
- A.B.S.-3,3Y(H10)/A5.1: E7018-1
- CERTIFIED BY C.W.B.- CSA W48

WELDING PROCESS

- SMAW (Stick)

INDUSTRIES

- Mobile Machinery
- Rail Road Car
- General Fabrication
- Automotive
- Civil Construction

TYPICAL MECHANICAL PROPERTIES

As Welded	
Yield Strength	69 ksi, 475 MPa
Tensile Strength	81 ksi, 565 MPa
Elongation in 2"	30%
Reduction in Area	72%
Stress Relieved 8 hrs. @ 1150°F (621°C)	
Yield Strength	60 ksi, 415 MPa
Tensile Strength	74 ksi, 510 MPa
Reduction in Area	72%
Elongation in 2"	33%

CHARPY V-NOTCH PROPERTIES

Testing Temperature -50°F (-46°C)	
As Welded	104 ft-lb, 141 J
Stress Relieved 8 hrs. @ 1150°F (621°C)	
	165 ft-lb, 224 J

WELD METAL ANALYSIS

C	0.04%
Mn	1.3%
Si	0.3%
P	0.014%
S	0.015%



ATOM ARC 7018-1 continued

DEPOSITION TABLE				
Diameter in (mm)	Optimal Current Amps	Current Range Amps	Deposition Rate lb/hr (kg/hr)	Efficiency %
3/32 (2.4)	90	70 - 100	1.7 (0.8)	66.3
1/8 (3.2)	120	90 - 160	2.6 (1.2)	71.6
	140	90 - 160	2.7 (1.2)	70.9
5/32 (4.0)	140	130 - 220	3.1 (1.4)	75
	170	130 - 220	3.8 (1.7)	73.5
3/16 (4.8)	200	200 - 300	4.9 (2.2)	76.4
	250	200 - 300	5.4 (2.4)	74.6
7/32 (5.6)	250	250 - 350	6.5 (2.9)	75
	300	250 - 350	7.2 (3.3)	74
1/4 (6.4)	300	300 - 400	7.7 (3.5)	78
	350	300 - 400	8.7 (3.9)	77

PART NUMBER / PRODUCT INFORMATION		
Part Number	Description	UPC
255013351	AA 7018-1 3/32X14X10#HS	662303016210
255013344	AA 7018-1 3/32X14X50#HS	662303016203
255011850	AA 7018-1 1/8X14X10#HS	662303016111
255011306	AA 7018-1 1/8X14X11#QP	662303028862
255011843	AA 7018-1 1/8X14X50#HS	662303016104
255015356	AA 7018-1 5/32X14X10#HS	662303016401
255015349	AA 7018-1 5/32X14X50#HS	662303016395
255013153	AA 7018-1 3/16X14X10#HS	662303016166
255013146	AA 7018-1 3/16X14X50#HS	662303016159
255017345	AA 7018-1 7/32X18X50#HS	662303016562
255011447	AA 7018-1 1/4X18X50#HS	662303016067